

rendering said process models as elements of a computer-based system in support of the work process,

instantiating project models as instances of said process models, and

rendering said project models as elements of a computer-based system in support of the work process.

15. The method of claim 14 further comprising

rendering said process models as directed graphs, whose nodes are abstract classes modeling decisions, and whose directed arcs or edges model dependencies between the nodal classes, and

rendering said project models as a partition of the graph of the instantiating process, where such partition is defined by a specified node from the process graph and all and only those other nodes that are dependent on said specified node.

16. A computer implemented method for traversing work process network models which are composed of nodal objects and directed arc objects connecting said nodal objects comprising

setting the state of every said directed arc object based upon the state of the nodal object at the initial or entry node of said directed arc object,

testing the state of every directed arc object in a collection of directed arc objects, when any directed arc object in said collection changes state, where the members of said collection are all and only those directed arc objects which have the same terminal or exit node, and

setting the state of the nodal object at the terminal or exit node of a collection of said directed arc objects based on the collective states of all members of the collection, where the members of said collection are all and only those directed arc objects which have the same terminal or exit node.

17. A computer implemented method of modeling and managing work processes comprising

using a network or graph whose nodes are abstract decision situations representing choices to be made, which choices are modeled by concrete decision classes and by instances of those classes, and

providing arc objects directed in each instance by the ordered pair of concrete decision classes associated with each arc object, where the entry or initial member of said ordered pair produces the data result required by the exit or terminal member of said ordered pair.

18. The method of claim 17 further comprising requiring each concrete decision class to support participation of multiple persons in differentiated roles.

19. The method of claim 18, further comprising requiring that incumbents of one differentiated role associated with a concrete decision class, make the choice modeled by said concrete decision class, and

requiring that the incumbents of a second differentiated role associated with a concrete decision class, have notice, elapsed time and access to the incumbent of the first role prior to the incumbent of said first role having made said choice,

requiring that the incumbents of a third differentiated role associated with a concrete decision class, have opportunity to inspect the results of the choice made by the incumbent of the first role after said choice, and to accept or reject said results without or without reference to established criteria, and

requiring that the incumbents of a fourth role associated with a concrete decision class, have timely notice of the results of the choice made by the incumbent of the first role after said choice has been made.

20. The method of claim 19, further comprising requiring that the incumbents of a fifth differentiated role associated with a concrete decision class, have the opportunity to inspect the results of the choice made by the incumbent of the first role after said choice, and to accept or reject said results, but only according to its conformance or non-conformance to established criteria.

21. An object-oriented application framework for building work process models comprising

an abstract, extensible decision class which encapsulates the common attributes and methods needed to model a decision or choice to be made,

an abstract, extensible data class which encapsulates the common attributes and methods needed to model the data result produced by the decision which is modeled by the abstract decision class, or alternatively,

a single abstract, extensible class which combines the attributes and methods of said abstract decision and data classes.

22. The framework of claim 21 further comprising a concrete directed arc class, which encapsulates the attributes and methods needed to model the dependency relationship between concrete decision classes, or instances of those classes, at the nodes of the directed arc instances, where such dependency arises from the requirement by one decision, the terminal or exit decision, for data produced by another decision, the initial or entry decision.

23. The framework of claim 22 further comprising an abstract decision role class which encapsulates the common attributes and methods needed to model the participation of people in a decision modeled by a concrete decision class.

24. The framework of claim 23 further comprising a concrete decision manager class as one specialization of the decision role class, where the role modeled by said decision manager class has the right to make the decision or choice modeled by the associated concrete decision class.

25. The framework of claim 24 further comprising a concrete approver class as an additional specialization of the decision role class, where the role modeled by said approver class has the right to veto said decision or choice.

26. The framework of claim 25 further comprising a concrete consultee class as an additional specialization of the decision role class, where the role modeled by said consultee class has the right to an opportunity to influence the decision or choice before said choice is made, but not the opportunity to veto said decision or choice.

27. The framework of claim 26 further comprising a concrete informee class as an additional specialization of the decision role class, where the role modeled by said informee class has the right to be timely informed of the result of making said decision or choice , and

28. The framework of claim 27 further comprising a concrete inspector class as an additional specialization of the decision role class, where the role modeled by said inspector class has the right to veto said decision or choice, but only as it fails to meet established criteria.

29. The framework of claim 28 further comprising a concrete rule class as a specialization of the data class, where an instance of said rule class may be specified by a concrete decision class for use in (a) making the decision or choice modeled by said decision class, (b) contingently determining the dependency of the decision modeled by said decision class on the result modeled by some other concrete decision class, or (c) contingently

determining the participation and role of persons in the decision or choice modeled by said concrete decision class.

Amend claims 1 and 11 as follows:

1. (Twice Amended) A method for managing work processes comprising instantiating project models as instances of a [decision] work process model comprised of interdependent decisions, to which said project models conform, rendering said process models as elements of a computer-based system in support of the work process, and rendering said project models as elements of a computer-based system [by] in support of the work process.

11. (Amended) The method of claim 2 further comprising providing [an abstract] a rule class as a subclass of the data class, providing that instances of said [abstract] rule class [is specialized into concrete classes that include at least a class each of whose instances] may be specified by a concrete decision class for use to completely determine the result of instances of said decision class by choosing the value of its associated decision's data object, and[providing none or more additional concrete rule classes whose instances]/or to contingently determine (i) the associated decision objects' requirement for some other specific data object, (ii) [determine] the associated decision objects' association with a specific role object, (iii) [determine]the incumbent of a specific role object associated with said decision object, and/or (iv) [determine]the use of a different [role] rule object associated with said decision object.